

# SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA  
KATO, Yukio  
KAWAMOTO, Takeshi  
KOYANO, Yasuhiko

<120> Human Fetus Chondrocyte-Derived Gene

<130> 046124-5025US

<140> US 09/555,342

<141> 2000-05-26

<150> PCT/JP98/05348

<151> 1998-11-27

<160> 30

<170> PatentIn Ver. 2.0

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Val	Ile	Thr	Ser	Trp	Phe	Gln	Ser	Thr	Val	Ser	Lys	Glu	Asp	Ala	Met	565	570	575
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Arg	Ser	Ala	Thr	Ser	Ser	Ala	Ser	Arg	Pro	His	Val	Leu	Ser	His	Lys	
1025					1030					1035					1040	
Glu	Ser	Leu	Val	Tyr												
1045																

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aaagacctca ccctccatct 20

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gtcgattacg tggagagcta 20

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cacagaccca gctcccaaac 20

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ccttcaggaa aactcgtgtc 20

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ttggagttgt gtgtggtcag 20

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gccaaaatag tcaccttcca cgagg 25

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ccttcaggaa aactcgtgtc 20

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<400> 17

aaacgraaga aygtrtgtrtg ytcwacaca 29

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<400> 18

ttccagctcc tagagattgc 20

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tcgtcttcgc tctcctcaat 20

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cgggtaacaa gcaggcggac gga 23

<210> 21  
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tcacttcgtg gtttcagagc 20

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tcgtcttcgc tctcctcaat 20

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<212> PRT  
<213> Homo sapiens

<400> 23

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Pro	Glu	Asn	Ser	Gly	Ile	Ser	Thr	Leu	Glu	Arg	Gly	Gln	Lys	Pro	Pro	
			20					25					30			
Pro	Thr	Pro	Ser	Gly	Lys	Leu	Val	Ser	Ile	Lys	Ile	Gln	Met	Leu	Asp	
		35					40					45				
Asp	Thr	Gln	Glu	Ala	Phe	Glu	Val	Pro	Gln	Arg	Ala	Pro	Gly	Lys	Val	
	50					55					60					
Leu	Leu	Asp	Ala	Val	Cys	Asn	His	Leu	Asn	Leu	Val	Glu	Gly	Asp	Tyr	
65					70				75						80	
Phe	Gly	Leu	Glu	Phe	Pro	Asp	His	Lys	Lys	Ile	Thr	Val	Trp	Leu	Asp	
				85					90					95		
Leu	Leu	Lys	Pro	Ile	Val	Lys	Gln	Ile	Arg	Arg	Pro	Lys	His	Val	Val	
			100					105					110			
Val	Lys	Phe	Val	Val	Lys	Phe	Phe	Pro	Pro	Asp	His	Thr	Gln	Leu	Gln	
		115					120					125				
Glu	Glu	Leu	Thr	Arg	Tyr	Leu	Phe	Ala	Leu	Gln	Val	Lys	Gln	Asp	Leu	
		130				135					140					
Ala	Gln	Gly	Arg	Leu	Thr	Cys	Asn	Asp	Thr	Ser	Ala	Ala	Leu	Leu	Ile	
145					150					155					160	
Ser	His	Ile	Val	Gln	Ser	Glu	Ile	Gly	Asp	Phe	Asp	Glu	Ala	Leu	Asp	
				165					170					175		

Arg Glu His Leu Ala Lys Asn Lys Tyr Ile Pro Gln Gln Asp Ala Leu  
 180 185 190  
 Glu Asp Lys Ile Val Glu Phe His His Asn His Ile Gly Gln Thr Pro  
 195 200 205  
 Ala Glu Ser Asp Phe Gln Leu Leu Glu Ile Ala Arg Arg Leu Glu Met  
 210 215 220  
 Tyr Gly Ile Arg Leu His Pro Ala Lys Asp Arg Glu Gly Thr Lys Ile  
 225 230 235 240  
 Asn Leu Ala Val Ala Asn Thr Gly Ile Leu Val Phe Gln Gly Phe Thr  
 245 250 255  
 Lys Ile Asn Ala Phe Asn Trp Ala Lys Val Arg Lys Leu Ser Phe Lys  
 260 265 270  
 Arg Lys Arg Phe Leu Ile Lys Leu Arg Pro Asp Ala Asn Ser Ala Tyr  
 275 280 285  
 Gln Asp Thr Leu Glu Phe Leu Met Ala Ser Arg Asp Phe Cys Lys Ser  
 290 295 300  
 Phe Trp Lys Ile Cys Val Glu His His Ala Phe Phe Arg Leu Phe Glu  
 305 310 315 320  
 Glu Pro Lys Pro Lys Pro Lys Pro Val Leu Phe Ser Arg Gly Ser Ser  
 325 330 335  
 Phe Arg Phe Ser Gly Arg Thr Gln Lys Gln Val Leu Asp Tyr Val Lys  
 340 345 350  
 Glu Gly Gly His Lys Lys Val Gln Phe Glu Arg Lys His Ser Lys Ile  
 355 360 365  
 His Ser Ile Arg Ser Leu  
 370  
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 <211> 347  
 <212> PRT  
 <213> Homo sapiens  
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 Met Pro Lys Pro Ile Asn Val Arg Val Thr Thr Met Asp Ala Glu Leu  
 1 5 10 15  
 Glu Phe Ala Ile Gln Pro Asn Thr Thr Gly Lys Gln Leu Phe Asp Gln  
 20 25 30  
 Val Val Lys Thr Ile Gly Leu Arg Glu Val Trp Tyr Phe Gly Leu His  
 35 40 45  
 Tyr Val Asp Asn Lys Gly Phe Pro Thr Trp Leu Lys Leu Asp Lys Lys  
 50 55 60  
 Val Ser Ala Gln Glu Val Arg Lys Glu Asn Pro Leu Gln Phe Lys Phe  
 65 70 75 80  
 Arg Ala Lys Phe Tyr Pro Glu Asp Val Ala Glu Glu Leu Ile Gln Asp

85										90					95				
Ile	Thr	Gln	Lys	Leu	Phe	Phe	Leu	Gln	Val	Lys	Glu	Gly	Ile	Leu	Ser				
			100					105					110						
Asp	Glu	Ile	Tyr	Cys	Pro	Pro	Glu	Thr	Ala	Val	Leu	Leu	Gly	Ser	Tyr				
		115					120					125							
Ala	Val	Gln	Ala	Lys	Phe	Gly	Asp	Tyr	Asn	Lys	Glu	Val	His	Lys	Ser				
	130					135					140								
Gly	Tyr	Leu	Ser	Ser	Glu	Arg	Leu	Ile	Pro	Gln	Arg	Val	Met	Asp	Gln				
145					150					155					160				
His	Lys	Leu	Thr	Arg	Asp	Gln	Trp	Glu	Asp	Arg	Ile	Gln	Val	Trp	His				
				165					170					175					
Ala	Glu	His	Arg	Gly	Met	Leu	Lys	Asp	Asn	Ala	Met	Leu	Glu	Tyr	Leu				
			180					185					190						
Lys	Ile	Ala	Gln	Asp	Leu	Glu	Met	Tyr	Gly	Ile	Asn	Tyr	Phe	Glu	Ile				
		195					200					205							
Lys	Asn	Lys	Lys	Gly	Thr	Asp	Leu	Trp	Leu	Gly	Val	Asp	Ala	Leu	Gly				
	210					215					220								
Leu	Asn	Ile	Tyr	Glu	Lys	Asp	Asp	Lys	Leu	Thr	Pro	Lys	Ile	Gly	Phe				
225					230					235					240				
Pro	Trp	Ser	Glu	Ile	Arg	Asn	Ile	Ser	Phe	Asn	Asp	Lys	Lys	Phe	Val				
				245					250					255					
Ile	Lys	Pro	Ile	Asp	Lys	Lys	Ala	Pro	Asp	Phe	Val	Phe	Tyr	Ala	Pro				
			260					265					270						
Arg	Leu	Arg	Ile	Asn	Lys	Arg	Ile	Leu	Gln	Leu	Cys	Met	Gly	Asn	His				
		275					280					285							
Glu	Leu	Tyr	Met	Arg	Arg	Arg	Lys	Pro	Asp	Thr	Ile	Glu	Val	Gln	Gln				
	290					295					300								
Met	Lys	Ala	Gln	Ala	Arg	Glu	Glu	Lys	His	Gln	Lys	Gln	Leu	Glu	Arg				
305					310					315					320				
Gln	Gln	Leu	Glu	Thr	Glu	Lys	Lys	Arg	Arg	Glu	Thr	Val	Glu	Arg	Glu				
			325					330						335					
Lys	Glu	Gln	Met	Met	Arg	Glu	Lys	Glu	Glu	Leu									
		340						345											
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<211> 334																			
<212> PRT																			
<213> Homo sapiens																			
<400> 25																			
Met	His	Cys	Lys	Val	Ser	Leu	Leu	Asp	Asp	Thr	Val	Tyr	Glu	Cys	Val				
1				5					10					15					
Val	Glu	Lys	His	Ala	Lys	Gly	Gln	Asp	Leu	Leu	Lys	Arg	Val	Cys	Glu				
			20					25						30					





<213> Homo sapiens

<400> 26

Ile Ala Lys Glu Val Ser Thr Thr Glu Arg Thr Tyr Leu Lys Asp Leu  
1 5 10 15

Glu Val Ile Thr Ser Trp Phe Gln Ser Thr Val Ser Lys Glu Asp Ala  
20 25 30

Met Pro Glu Ala Leu Lys Ser Leu Ile Phe Pro Asn Phe Glu Pro Leu  
35 40 45

His Lys Phe His Thr Asn Phe Leu Lys Glu Ile Glu Gln Arg Leu Ala  
50 55 60

Leu Trp Glu Gly Arg Ser Asn Ala Gln Ile Arg Asp Tyr Gln Arg Ile  
65 70 75 80

Gly Asp Val Met Leu Lys Asn Ile Gln Gly Met Lys His Leu Ala Ala  
85 90 95

His Leu Trp Lys His Ser Glu Ala Leu Glu Ala Leu Glu Asn Gly Ile  
100 105 110

Lys Ser Ser Arg Arg Leu Glu Asn Phe Cys Arg Asp Phe Glu Leu Gln  
115 120 125

Lys Val Cys Tyr Leu Pro Leu Asn Thr Phe Leu Leu Arg Pro Leu His  
130 135 140

Arg Leu Met His Tyr Lys Gln Val Leu Glu Arg Leu Cys Lys His His  
145 150 155 160

Pro Pro Ser His Ala Asp Phe Arg Asp Cys Arg Ala Ala Leu Ala Glu  
165 170 175

Ile Thr Glu Met Val Ala Gln Leu His Gly Thr Met Ile Lys Met Glu  
180 185 190

Asn Phe

<210> 27

<211> 176

<212> PRT

<213> Homo sapiens

<400> 27

Val Leu Asn Glu Leu Ile Gln Thr Glu Arg Val Tyr Val Arg Glu Leu  
1 5 10 15

Tyr Thr Val Leu Leu Gly Tyr Arg Ala Glu Met Asp Asn Pro Glu Met  
20 25 30

Phe Asp Leu Met Pro Pro Leu Leu Arg Asn Lys Lys Asp Ile Leu Phe  
35 40 45

Gly Asn Met Ala Glu Ile Tyr Glu Phe His Asn Asp Ile Phe Leu Ser  
50 55 60

Ser Leu Glu Asn Cys Ala His Ala Pro Glu Arg Val Gly Pro Cys Phe

65		70		75		80
Leu Glu Arg Lys Asp	Asp Phe Gln Met Tyr Ala Lys Tyr Cys Gln Asn					
	85			90		95
Lys Pro Arg Ser Glu Thr Ile Trp Arg Lys Tyr Ser Glu Cys Ala Phe						
	100		105		110	
Phe Gln Glu Cys Gln Arg Lys Leu Lys His Arg Leu Arg Leu Asp Ser						
	115		120		125	
Tyr Leu Leu Lys Pro Val Gln Arg Ile Thr Lys Tyr Gln Leu Leu Leu						
	130		135		140	
Lys Glu Leu Leu Lys Tyr Ser Lys Asp Cys Glu Gly Ser Ala Leu Leu						
	145		150		155	160
Lys Lys Ala Leu Asp Ala Met Leu Asp Leu Leu Lys Ser Val Asn Asp						
	165		170			175

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 <211> 175  
 <212> PRT  
 <213> Rattus rattus

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Val Met Asn Glu Leu Leu Asp Thr Glu Arg Ala Tyr Val Glu Glu Leu
1 5 10 15
Leu Cys Val Leu Glu Gly Tyr Ala Ala Glu Met Asp Asn Pro Leu Met
20 25 30
Ala His Leu Ile Ser Thr Gly Leu Gln Asn Lys Lys Asn Ile Leu Phe
35 40 45
Gly Asn Met Glu Glu Ile Tyr His Phe His Asn Arg Ile Phe Leu Arg
50 55 60
Glu Leu Glu Ser Cys Ile Asp Cys Pro Glu Leu Val Gly Arg Cys Phe
65 70 75 80
Leu Glu Arg Met Glu Glu Phe Gln Ile Tyr Glu Lys Tyr Cys Gln Asn
85 90 95
Lys Pro Arg Ser Glu Ser Leu Trp Arg Gln Cys Ser Asp Cys Pro Phe
100 105 110
Phe Gln Glu Cys Gln Lys Leu Asp His Lys Leu Ser Leu Asp Ser Tyr
115 120 125
Leu Leu Lys Pro Val Gln Arg Ile Thr Lys Tyr Gln Leu Leu Leu Lys
130 135 140
Glu Met Leu Lys Tyr Ser Lys His Cys Glu Gly Ala Glu Asp Leu Gln
145 150 155 160
Glu Ala Leu Ser Ser Ile Leu Gly Ile Leu Lys Ala Val Asn Asp
165 170 175

<210> 29  
 <211> 185

<212> PRT  
<213> Mus musculus

<400> 29

Val	Ala	Lys	Glu	Leu	Tyr	Gln	Thr	Glu	Ser	Asn	Tyr	Val	Asn	Ile	Leu	
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Ala	Thr	Ile	Ile	Gln	Leu	Phe	Gln	Val	Pro	Leu	Glu	Glu	Glu	Gly	Gln	
			20					25					30			
Arg	Gly	Gly	Pro	Ile	Leu	Ala	Pro	Glu	Glu	Ile	Lys	Thr	Ile	Phe	Gly	
			35				40					45				
Ser	Ile	Pro	Asp	Ile	Phe	Asp	Val	His	Met	Lys	Ile	Lys	Asp	Asp	Leu	
	50					55					60					
Glu	Asp	Leu	Ile	Ala	Asn	Trp	Asp	Glu	Ser	Arg	Ser	Ile	Gly	Asp	Ile	
65					70					75					80	
Phe	Leu	Lys	Tyr	Ala	Lys	Asp	Leu	Val	Lys	Thr	Tyr	Pro	Pro	Phe	Val	
				85					90					95		
Asn	Phe	Phe	Glu	Met	Ser	Lys	Glu	Met	Ile	Ile	Lys	Cys	Glu	Lys	Gln	
			100					105					110			
Lys	Pro	Arg	Phe	His	Ala	Phe	Leu	Lys	Ile	Asn	Gln	Ala	Lys	Pro	Glu	
		115					120					125				
Cys	Gly	Arg	Gln	Ser	Leu	Val	Glu	Leu	Leu	Ile	Arg	Pro	Val	Gln	Arg	
	130					135					140					
Leu	Pro	Ser	Val	Ala	Leu	Leu	Leu	Asn	Asp	Leu	Lys	Lys	His	Thr	Ala	
145					150					155					160	
Asp	Glu	Asn	Pro	Asp	Lys	Ser	Thr	Leu	Glu	Lys	Ala	Ile	Gly	Ser	Leu	
				165					170					175		
Lys	Glu	Val	Met	Thr	His	Ile	Asn	Asp								
			180					185								

<210> 30

<211> 184

<212> PRT

<213> Homo sapiens

<400> 30

Ile	Ala	Asn	Glu	Leu	Leu	Gln	Thr	Glu	Lys	Ala	Tyr	Val	Ser	Arg	Leu	
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His	Leu	Leu	Asp	Gln	Val	Phe	Cys	Ala	Arg	Leu	Leu	Glu	Glu	Ala	Arg	
			20					25					30			
Asn	Arg	Ser	Ser	Phe	Pro	Ala	Asp	Val	Val	His	Gly	Ile	Phe	Ser	Asn	
		35					40					45				
Ile	Cys	Ser	Ile	Tyr	Cys	Phe	His	Gln	Gln	Phe	Leu	Leu	Pro	Glu	Leu	
	50					55					60					
Glu	Lys	Arg	Met	Glu	Glu	Trp	Asp	Arg	Tyr	Pro	Arg	Ile	Gly	Asp	Ile	
65					70					75					80	

Leu	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Gly	Glu	Tyr	Val	Lys
			85						90					95	
Asn	Phe	Asp	Arg	Ala	Val	Glu	Leu	Val	Asn	Thr	Trp	Thr	Glu	Arg	Ser
			100					105					110		
Thr	Gln	Phe	Lys	Val	Ile	Ile	His	Glu	Val	Gln	Lys	Glu	Glu	Ala	Cys
			115				120					125			
Gly	Asn	Leu	Thr	Leu	Gln	His	His	Met	Leu	Glu	Pro	Val	Gln	Arg	Ile
	130					135					140				
Pro	Arg	Tyr	Glu	Leu	Leu	Leu	Lys	Asp	Tyr	Leu	Leu	Lys	Leu	Pro	His
145					150					155					160
Gly	Ser	Pro	Asp	Ser	Lys	Asp	Ala	Gln	Lys	Ser	Leu	Glu	Leu	Ile	Ala
				165					170					175	
Thr	Ala	Ala	Glu	His	Ser	Asn	Ala								
			180												